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ABSTRACT

Two questionnaires were developed to assess the knowledge levels and perceived inservice training needs of those working in handicapped preschool programs in New Mexico and in El Paso Independent School District (EPSID). The New Mexico instrument was sent to all personnel in the state identified as having a connection with preschool programs for the handicapped. These ranged from people in state human services agencies, curriculum coordinators, directors, teachers and aides of public, private and community-based programs. The EPISD instrument was sent to teachers and aides within the district who were actively engaged in teaching preschool handicapped children. Respondents' expressed relative knowledge levels and inservice training needs for each item on the questionnaire were ranked in order of importance. The nonparametric test, Wilcoxon rank sum test, equivalent to the Mann Whitney U-test, was used to determine if there were differences between New Mexico rural and New Mexico urban groups, New Mexico urban and El Paso groups, and between combined urban (New Mexico and El Paso) and New Mexico rural groups. In all cases rural groups tended to perceive themselves as having lower knowledge levels and higher inservice training needs than the urban groups. (AH)

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Self-Assessment of Knowledge and Training Needs for Personnel Serving Preschool-Aged Handicapped Children: A Rural-Urban Comparison

William J. Wachtel, Ph.D.
El Paso Independent School District
Sandra M. Abernathy, Ph.D.
New Mexico State University
Stephen W. Stile, Ph.D
New Mexico State University

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Abstract

Both New Mexico and Texas are in need of more qualified instructors for preschool handicapped children. Improvement of instructors' skills can, in part, be accomplished through inservice training.

Two questionnaires were developed to assess the knowledge levels and perceived inservice training needs of those working in preschool programs in New Mexico and in El Paso Independent School District (EPSID). The New Mexico questionnaire contained eighteen items which were used to determine the perceived knowledge level and the inservice training needs of New Mexico State University's target population and to compare responses for New Mexico personnel working in rural and urban areas. Fifteen of these were comparable to items found on the EPISD instrument and were used to compare New Mexico urban responses with EPISD responses and to compare combined urban (EPISD and New Mexico urban) responses with New Mexico rural responses.

Respondents' expressed relative knowledge levels and inservice training needs for each item on the questionnaire were ranked in order of importance. The nonparametric test, Wilcoxon rank sum test, was used to determine if there were differences between the various groupings. In all cases rural groups tended to perceive themselves as having lower knowledge levels and higher inservice training needs than the urban groups.

Self-Assessment of Knowledge and Training Needs for Personnel Serving Preschool-Aged Handicapped Children: A Rural-Urban Comparison.

During the past twenty-five years, the rationale for preschool education of the handicapped has become increasingly clear. Programs for these children (whether they be delivered in public school kindergarten classrooms or other settings such as Head Start or special preschools supported by agencies such as the New Mexico Developmental Disabilities Bureau) can be justified from at least the following six points-of-view (Stile & Stile, 1979):

1. Effectiveness of Preschool Programs. Data obtained from First Chance Network projects (Jordan, Hayden, Karnes & Wood, 1977), Head Start programs (Haring, 1978) and more recently from early childhood projects approved by the U.S. Department of Education's Joint Dissemination and Review Panel (Antley & Dubose, 1981) indicate that: (a) these programs are effective in terms of learner gains; and (b) that "graduates" of these programs tend to require less intensive special education and related services during subsequent school years (See Table 1 on following pages from Antley & Dubose, 1981).

2. Legal Rights. Section 504 of The Vocational Rehabilitation Act of 1973 prohibits discrimination on the basis of one's handicapping conditions regardless of severity (Ballard

Table 1: PROGRAM FINDINGS FROM SOME EXEMPLARY PROJECTS

PROGRAM	POPULATION	SERVICE DELIVERY MODEL	FINDINGS	COST
Project Ski*Hi, Logan, UT (1X13) Contact: Tom Clark	Hearing impaired	Home intervention, teaches parents to help child at home.	Av. 16 months development gains in 11 months of programming. Infants made better progress than children enrolled in preschool years. 4 yr-olds with 21 months' treatment had lower language level than 2½ yr-olds who received 13 month's treatment.	$1,450 per child for 11 months includes all staff and direct services
Special Education Preschool Program, UNISTAPS, Minneapolis, MN (1X2X13) Contact: Nancy Shaner	Hearing impaired mentally retarded, behaviorally dist., learning disabled	Center-based, family-oriented	Of pupils graduating 1969-79, 75% were placed and retained in fully integrated programs.	$16. per day for a half-day program lasting approximately 160 days
Teaching Research and Child Center Classroom for Moderately and Severely Handicapped Children, Monmouth, OR (1X3) Contact: Torry Templeman	Mentally retarded, multiply handicapped, CP, behavioral disorders, hearing impaired	Center-based, small group and individual instruction to raise developmental skills	18 children ages 13 mo. to 6 yrs. entered program competent in 39% of curriculum objectives (7 areas). After 7 mos. intervention, 84% were completed, a gain of 45% or 6.4% per month.	$3,592 per child
Project PEECH, Champaign, IL (1X13) Contact: Merle Karnes	Developmentally delayed, high-risk	Center-based, extensive parent involvement, normal models, individual instruction.	IQ of 87 (range = 35-125) raised an average of 9.1 points (range = 47-136). 86% of one class of grads entered regular ed., 14% in special ed.	$3,450 per child per year, including the University contribution for training, etc.
Macomb 0-3 Regional Project: A Rural Child/Parent Service, Macomb, IL (14) Contact: Patricia L. Hutinger	Handicapped children birth to three	Rural, home-based and sharing centers. Extensive parent involvement	39 children demonstrated significant (.012) pre-post gains in 5 areas on Alpern-Boll and 2 language areas on REEL. Average gains were 1.7 mos. per month in the program.	$2,411/yr per child start-up, $2,237/yr/child thereafter

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Table 1 (Cont'd)

PROGRAM	POPULATION	SERVICE DELIVERY MODEL	FINDINGS	COST
Communication Seattle, WA (1)(4)(13) Contact: Rebecca F. DuBose	Communication delayed	Center-based program for children 2-6 yrs and families. Stresses communication skills in the regular classroom.	Average gains of 1.27-2.11 mos. per month of programming (SICD) Average PPVT scores 1.18 - 2.05 months gain per month. Youngest pupils made best receptive lang. gains of 4 groups ($\bar{X}$ 1.80 mo), and second best expressive gains ($\bar{X}$ 2.01 mo) for 4 groups. Av. length of program time at testing for youngest group was 10 mos.	$3,432 per child, including all costs.
Program for Children with Down Syndrome and Other Developmental Delays, Seattle, WA (1)(4)(13) Contact: Rebecca F. DuBose	Down syndrome, moderately mentally retarded	Center-based, 0-6 yrs. Parent involvement, small group and individual instruction	Infants ($\bar{X}$ CA 16.6 mos.) made mental gains of $\bar{X}$ .74 mo/month and $\bar{X}$ .46 mo. in motor skills over 11 mo. period (Bayley). Outreach site preschool pupils ($\bar{X}$ CA 36 mos) made $\bar{X}$ gains of .58 mo/mo. in program (DSPI).	$3,432 per child, including all costs
Portage Project, Portage, WI (1)(13) Contact: Neal Schortinghuis	Developmentally delayed, mental age 0-6 years	Home-based program for children and families	15 months gain in 8 months of programming (Cattell Infant Test and S-B). Greater gains in primary grade made by project children in mental age, language, academic, and social skills, than children with only classroom instruction.	$650 per pupil after start-up is the average for a representative program
Cognitively Oriented Preschool Curriculum High/Scope Ypsilanti Perry Preschool Project, Ypsilanti, MI(1)(5)(6)(13) Contact: Larry Schweinhardt	Developmentally delayed At-risk	Center-based, Piagetian, open framework, with emphasis on social skills, cognitive application, skills generalization	Average 2.02 months gain in mental age for every month in program (McCarthy Scales).	$2,992 per pupil in 1979 dollars; cost for typical Head Start Program is $2,464 per child

& Zettel, 1977). Thus, it is a violation of Federal law in New Mexico and Texas to deny public school kindergarten programs (i.e., special education and related services) to handicapped children who have reached their fifth birthday.

3. Parent Programming. It is a "given" (Jordan, et al., 1977) that parents/families are also served in programs for young handicapped children. Parents are recipients of a variety of training programs including those stressing direct instructional techniques (Stile & Atkinson, 1976) and advocacy. In addition, parents are given the opportunity to "ventilate" and respite care is provided.

4. Learning. From a learning prospective, children have obtained 80 percent of their total adult intellectual capacity by eight years of age (Roos, 1974). Other arguments supporting early intervention with handicapped children from a learning point-of-view are that: (a) learning is more rapid and facile in early years; (b) it is easier to learn new behaviors than to stamp out one set and replace it with another; and (c) the earlier a child starts school, the more skills he or she will have upon leaving school.

5. Social Change. Associated with a growing number of teen-aged mothers is a growing number of "high risk" births (Forbes, 1958). Additionally, medical advances have made possible the survival of an increasingly high proportion of premature infants for whom risk of central nervous system and

visual handicaps is great (Meier, 1973).

6. Educational Economics. Early education of handicapped children is also supported from an economics point-of-view. As Frohreich (1973) has described it, special education is more expensive than the regular variety due to (among other reasons) the necessity for a higher teacher/student ratio. Thus, if the need for special education and related services is minimized through early intervention, "excess costs" may be reduced significantly. According to WESTAR (Antley & Dubose, 1981) for example: if intervention begins in infancy, the cost of eighteen years of education will be $37,273. If the child is not placed until preschool, the cost is $37,600. If the intervention is delayed until age six. the cost rises to between $46,816 and $54,340, depending on how much regular education the child can receive.

The Problem

In response to the previously stated arguments, services are presently delivered to New Mexico's handicapped preschool population (0-5 years) in a variety of programs including: (a) special infant, toddler and preschool classes; (b) Head Start programs; and (c) public school kindergartens. Recent data (Price, 1981) concerning the number of children currently served are reported in Table 2. However, the following twofold problem appears to mitigate against the optimal impact of these programs:

Table 2: Numbers of Children served in 3 types of Programs for New Mexico's Preschool Handicapped (0-5) Population (Price, 1981)[2]

Community based programs funded by DD Bureau (N = 17)	Head Start Programs	Public-School Kindergartens
447 Children (0-5 years)	312 Children (3-5 years)	452 Children (5 years old)

NOTE: TOTAL N = 1,211 (Head Count)

[2]Data not available at this time from migrant programs, private preschools, etc.

1. The current preschool personnel tend to be untrained and/or undertrained in the existing educational technology (Abt Associates, 1976; Antley & Dubose, 1981; Fredricks, 1977; Tawney, 1979) which would allow them to maximize effectiveness in terms of learner gains. As Karnes (1975) has put it, teachers who have been trained to work with normal young children (early childhood certification) or with older handicapped children (special education certification) are unprepared to assume the multiple responsibilities of the teacher of preschool handicapped children. Such a teacher "is often a diagnostician, curriculum developer, manager and team leader, parent worker, trainer of volunteers and paraprofessionals, and public relations expert (p. 81). In addition, these individuals are also teachers of a unique population of children (Hirshoren & Umansky, 1977).

2. It is estimated that the majority of New Mexico's preschool (ages Ø-5) handicapped children are <u>not</u> currently being served in any type of program (Price, 1981). This is especially true in the State's rural-remote areas. Table 3 describes these data.

Kindergarten children residing within the boundries of the El Paso Independent School District (EPISD) are currently sought out to be served by the district. The district is concerned that the teachers and aides assigned to the program have adequate skills to successfully carry out their duties and that inservice training be provided to maintain and update these skills.

Table 3: Estimates of New Mexico's Unserved Population of Preschool-Aged Handicapped Children (0-5)[4]

Estimated number of unserved population of severely handicapped preschool-aged children calculated by application of 1.87% prevalence figure[5] to the estimated 0-5 population (124,318)[6] of New Mexico after subtracting out the 1,211 children already served in preschools for the handicapped	Estimated number of unserved population of handicapped preschool-aged children calculated by application of New Mexico Special Education Division's 8.5% prevalence figure[7] for school-aged children to the estimated 0-5 population after subtracting out the 1,211 children already served	Estimated number of unserved population of handicapped preschool-aged children calculated by application of BEH (1976) 12% prevalence figure for school-aged children to the estimated 0-5 population after subtracting out the 1,211 children already served
N = 1,116	N = 10,544	N = 15,342

NOTES

[4]White House conference (1976) estimate of percent unserved in preschool handicapped population in U.S. was 75%.

[5]Developmental Disabilities Planning Council, 1981.

[6]New Mexico Statistical Abstract. Bureau of Business Research, University of New Mexico, 1980.

[7]New Mexico Special Education Division, 1981.

Purpose

The U.S. Office of Education (USOE) recently awarded a three-year grant to the Special Education Component of New Mexico State University (NMSU) to provide inservice training to and develop support systems for "regular educators" who serve handicapped infants (0-18 months), toddlers (18 months - 3 years) and preschoolers (3-5 years) in New Mexico's community-based Head Start and public-school kindergarten programs. Personnel trained in the project will assume the following two roles: (a) classroom teachers (i.e., "early childhood specialists"); and (b) "early childhood specialist trainers." Thus, selected trainees will provide field-based inservice training in addition to serving as teachers in their home programs. Relative to problem area number two above (i.e., unserved children), it was proposed that inservice training for the target population shall place an emphasis upon primary diagnosis (e.g., early indentification and screening).

EPISD is engaged in determining current skill levels of district employees and providing inservice training in those areas that need improvement. It is hoped that the process will provide the district with more highly qualified and confident employees who, in turn, will provide improved services to students. Teachers and aides of preschool handicapped students comprise one such group within the district.

The present paper has the following four-fold purpose: (a) to present data regarding the perceived knowledge and inservice training needs of NMSU's target population; (b) to compare responses for New Mexico personnel working in rural and urban areas; (c) to compare New Mexico urban responses with El Paso, Texas urban responses; and (d) to compare combined urban (El Paso and New Mexico urban) responses with New Mexico rural responses.

Methodology

Two self-report needs assessment instruments were constructed based upon information obtained in a 1982 ERIC search of documents pertaining to early intervention with handicapped children. A five-point Likert Scale was used for responses. The first instrument consisted of eighteen items and was sent to NMSU/USOE Project's target population to establish training needs for four regional workshops to be conducted during the 1982-83 Academic Year. The second instrument was constructed for purposes of long-range planning in the area of inservice training for El Paso Public School's early childhood education staff. Fifteen of the fifty items on the EPISD instrument corresponded to the NMSU instrument. Fiscal management of public school programs and Fiscal management of community-based programs were omitted because these are not areas of teacher responsibility. Criterion-referenced assessment was omitted since it was addressed indirectly by numerous items in the EPISD instrument which made comparison difficult.

The New Mexico instrument was sent to all personnel in the state identified as having a connection with preschool programs for the handicapped. These ranged from people in state human services agencies, curriculum coordinators, directors, teachers and aides of public, private and community-based programs. The EPISD instrument was sent to teachers and aides within the district who were actively engaged in teaching preschool

handicapped children.

Respondents' expressed relative knowledge levels and inservice training needs for each item on the questionnaire were ranked in order of importance. The nonparametric test, Wilcoxon rank sum test, equivelant to the Mann Whitney U-test, (SAS User's Guide, 1979, pp. 331-34) was used to determine if there were differences between New Mexico rural and New Mexico urban groups, New Mexico urban and El Paso groups and between combined urban (New Mexico and El Paso) and New Mexico rural groups. For purposes of the present paper, it was determined that New Mexico urban responses would be those from personnel who indicated an Albuquerque, Las Cruces or Santa Fe business address (Edington, 1983).

Results

The NMSU instrument was sent to 424 addresses found on a project mailing list. After six weeks, 140 responses were obtained (33.0%) of which 116 were usable. The El Paso instrument was mailed to thirty district personnel and after one and one half weeks, twenty responses were received for a response rate of 66.7%.

Table 4 lists the eighteen items ranked in order of expressed knowledge level for the 159 respondents. Fiscal management for both public school programs and community-based programs were marked as areas in which respondents had the least knowledge. Customs and traditions of cultural groups and student record-keeping systems were marked as areas in which respondents had the highest knowledge level.

Table 5 lists the same eighteen items in rank order according to respondents' expressed need for inservice training. Development of educational programs and and Relevancy and use of school-specific languages were ranked as least needed and Identification/screening of high risk children and Parent training techniques were ranked as most needed. Not surprisingly, the two items indicated as lowest in knowledge level were ranked higher (eighth) in inservice training needs, and the two knowledge level items marked highest were ranked lowest in need for inservice training.

Table 4. Rank Order (low = 1, high = 5) of Knowledge Level in Eighteen Areas for the Total Group

ITEM	N	MEAN RANK	STD. DEV.
Fiscal management of public school programs for early childhood special education.	116	2.1	1.01
Fiscal management of community-based programs for early childhood special education.	116	2.3	1.10
Relevancy and use of school-specific languages (Spanish, Navaho, etc.).	135	2.7	1.32
Identification/screening of high risk children.	135	2.8	1.27
Providing public awareness and soliciting support for early childhood special education.	135	2.8	1.09
Use of early childhood/handicapped instructional materials.	135	2.9	1.23
Use of criterion-referenced assessment techniques and instruments.	116	2.9	1.20
Parent training techniques.	135	3.0	1.09
Use of developmental tasks approach to instruction.	135	3.1	1.01
Models for parent participation.	135	3.1	1.06
Behaviors of young handicapped children.	135	3.1	1.06
Application of operant behaviorism.	135	3.2	1.08
Child-abuse identification and reporting procedures.	135	3.2	1.16
Curriculum planning.	135	3.2	1.03
Development of individualized educational programs (IEP's).	135	3.2	1.14
Classroom/instructional management systems.	135	3.3	1.01
Customs and traditions of cultural groups represented by the student body.	135	3.3	1.13
Student record keeping systems.	135	3.3	1.08

Table 5. Rank Order (low = 1, high = 5) of Need for Inservice Training in Eighteen Areas for the Total Group

ITEM	N	MEAN RANK	STD. DEV.
Development of individualized educational programs (IEP's).	135	2.9	1.36
Revelancy and use of school-specific languages.	135	2.9	1.30
Customs and traditions of cultural groups represented by the student body.	135	2.9	1.32
Student record keeping systems.	135	3.0	1.23
Classroom/instructional management systems.	135	3.1	1.20
Application of operant behaviorism.	135	3.1	1.23
Curriculum planning.	135	3.1	1.28
Use of criterion-referenced assessment techniques and instruments.	116	3.3	1.25
Fiscal management of community-based programs for early childhood special education.	135	3.4	1.22
Fiscal management of public school programs for early childhood special education.	135	3.4	1.31
Child-abuse identification and reporting procedures.	135	3.4	1.33
Use of developmental tasks approach to instruction.	135	3.4	1.12
Providing public awareness and soliciting support for early childhood special education.	135	3.5	1.23
Behaviors of young handicapped children.	135	3.6	1.23
Models for parent participation.	135	3.6	1.06
Use of early childhood/handicapped instructional materials.	135	3.6	1.23
Identification/screening of high risk children.	135	3.8	1.26
Parent training techniques.	135	3.8	1.19

When New Mexico rural and New Mexico urban groups were compared, it was found that of the eighteen items only three items were significantly different at the 0.05 level between the two groups in the area of perceived knowledge. These were Parent training techniques, Identification/screening of high risk children and Use of criterion-referenced assessment techniques and instruments. The New Mexico urban group showed a significantly higher knowledge level than the rural group for these areas. No significant differences were found for inservice training needs. Table 6 shows the mean rankings for the three items.

Table 6. Knowledge Level Items Found to be Different Between New Mexico Rural and New Mexico Urban Groups

ITEM	NM RURAL N	NM RURAL RANK	NM URBAN N	NM URBAN RANK	F	P
Parent training techniques	97	2.7	19	3.6	11.31	0.004
Identification/screening of high risk children	97	2.6	19	3.7	12.90	0.001
Use of criterion-referenced assessment techniques and instruments	97	2.8	19	3.5	5.35	0.03

When El Paso and New Mexico urban groups were compared, three knowledge areas were found to be significantly different. These were Use of early childhood/handicapped instructional

materials, Customs and traditions of cultural groups represented by the student body and Identification/screening of high risk children. The El Paso group showed a significantly higher knowledge level for the first two items while the New Mexico urban group showed a higher level of knowledge in the area of Identification/screening of high risk children. Table 7 shows the mean ranks for El Paso and New Mexico urban groups.

Table 7. Knowledge Level Items Found to be Different Between El Paso and New Mexico Urban Groups

ITEM	EL PASO N	EL PASO RANK	NM URBAN N	NM URBAN RANK	F	P
Use of early childhood/ handicapped instructional materials	19	3.8	19	2.9	7.41	0.008
Customs and traditions of cultural groups represented by the student body	19	3.8	19	3.1	5.40	0.02
Identification/screening of high risk children	19	2.5	19	3.7	11.28	0.003

In addition, three inservice training needs were found to be significantly different. These were Application of operant behaviorism, Behaviors of young children and Parent training techniques. The New Mexico urban group ranked each item significantly higher than did the El Paso group. Table 8 displays those items found to be significantly different between El Paso and New Mexico urban respondents.

Table 8. Inservice Training Needs Found to be Significantly Different Between El Paso and New Mexico Urban Groups

ITEM	EL PASO N	EL PASO RANK	NM URBAN N	NM URBAN RANK	F	P
Application of operant behaviorism	19	2.2	19	3.0	5.98	0.02
Behaviors of young handicapped children	19	2.3	19	3.7	14.46	0.002
Parent training techniques	19	3.2	19	4.0	3.34	0.04

A final comparison was made between combined urban and New Mexico rural groups. The greatest number of significant differences were found when these two were compared. Of the eighteen knowledge level items, five were significantly different. These were Application of operant behaviorism, Use of early childhood/handicapped instructional materials, Behaviors of young handicapped children, Parent training techniques and Identification/screening of high risk children. In all instances the rural group indicated a lower knowledge level. Four inservice training items were found to be significantly different between the two groups. These were Application of operant behaviorism, Use of early childhood/handicapped instructional materials, Behaviors of young handicapped children, and Child-abuse indentification and reporting procedures. Again, the rural group indicated a greater inservice training need than the combined urban group. Table 9 and 10 display those items which

were found to be significantly different for these groups.

Table 9. Knowledge Level Items Found to be different Between Combined Urban and New Mexico Rural Groups

ITEM	COMB. URBAN N	COMB. URBAN RANK	NM RURAL N	NM RURAL RANK	F	P
Application of operant behaviorism	38	3.7	97	3.0	13.45	0.001
Use of early childhood/ handicapped instructional materials	38	3.4	97	2.6	15.44	0.001
Behaviors of young handicapped children	38	3.6	97	2.9	12.05	0.001
Parent training techniques	38	3.6	97	2.7	18.19	0.0002
Identification/screening of high risk children	38	3.1	97	2.6	4.79	0.04

Table 10. Inservice Training Needs Found to be Different Between Combined Urban and New Mexico Rural Groups

ITEM	COMB. URBAN N	COMB. URBAN RANK	NM RURAL N	NM RURAL RANK	F	P
Application of operant behaviorism	38	2.6	97	3.3	9.93	0.003
Use of early childhood/ handicapped instructional materials	38	3.0	97	3.9	15.44	0.001
Behaviors of young children	38	3.0	97	3.8	11.96	0.03
Child-abuse identifiction and reporting procedures	38	2.9	97	3.6	6.53	0.007

Conclusion

In all cases the differences between urban and rural groups in the area of perceived knowledge and inservice training needs indicated that rural groups tended to perceive themselves as less highly trained than their urban counterparts and that training needs should focus on fundemental aspects of early childhood/handicapped education such as Use of early childhood/handicapped instructional materials, Behaviors of young children, and Application of operant behaviorism.

The comparison of EPISD and New Mexico urban groups showed EPISD stronger in the use of Early childhood/handicapped instructional materials which indicates the success of a highly developed curriculum. EPISD's higher knowledge level in the Customs and traditions of cultural groups represented by the student body reflects the bicultural nature of the district and the district's efforts to serve those students. EPISD's lower expressed knowledge of Identification/screening of high risk children indicates that this is primarily accomplished by the district's educational diagnosticans. New Mexico's urban group contained community-based programs that actively engaged in the identificatin of such children.

The EPISD and New Mexico urban groups inservice training needs differed significantly in three areas. In the cases of Application of operant behaviorism and Behavior of young handicapped children, EPISD reported higher levels of knowledge

which could account for their reduced desire for inservice training as compared to the New Mexico urban group. The New Mexico urban group appears to place greater importance on Parent training techniques since they reported a higher need for additional training while reporting a comparable knowledge level. This may reflect the basic difference in composition between the two groups, since New Mexico's group included programs other than public school programs.

The comparison of a combined urban group (EPISD and New Mexico urban) with New Mexico rural indicates that urban preschool personnel appear to have more formal training as indicated by relative knowledge levels. This trend reinforces the commonly-held belief that urban areas have access to more qualified instructors. Three of the areas that were significantly different in knowledge level were also significantly different in need for additional inservice training. The combined urban group marked knowledge of Applictation of operant behaviorism, Use of early childhood/handicapped instructional materials and Behaviors of young handicapped children as significantly higher than the rural group, whereas the rural group indicated a significantly greater need for inservice training in these areas than did the urban group.

The results of the two questionnaires indicated many similarities in the level of knowledge and the need for inservice

training of early childhood/handicapped instructors. However, it would appear that inservice training of rural early childhood/handicapped instructors should focus on areas that are usually included in formal preservice training programs.

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